

WHAT IS CLAIMED IS:

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1. An enhanced mechanical gaming system utilizing a touch panel as a user control device for mechanical assemblies and game play features, the system comprising:
a gaming machine assembly;
a touch sensor assembly utilizing a substantially transparent touch panel that produces touch data when activated, and wherein the touch panel provides viewing behind the touch panel;
a touch panel controller capable of controlling and interpreting the touch panel; and
touch panel software capable of controlling and interpreting the touch data, and applying the touch data to interactive applications of the gaming machine assembly.

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2. The system of Claim 1, wherein the gaming machine assembly comprises a reel spinning game machine having at least one reel.

3. The system of Claim 2, wherein a user of the reel spinning game machine is capable of selectively starting and stopping the reels by touching the touch panel at a particular point.

4. The system of Claim 2, wherein a user of the reel spinning game machine is capable of activating different game features by using distinct types, directions, and durations of touches.

5. The system of Claim 2, wherein a user of the reel spinning game machine is capable of selectively activating features and system controls by touching the touch panel at particular points.

6. The system of Claim 1, wherein the substantially transparent touch panel is composed of a composite material.

7. The system of Claim 6, wherein the composite material touch panel comprises a glass material touch panel.

8. The system of Claim 1, wherein the substantially transparent touch panel is composed of a metallic material.

9. The system of Claim 1, wherein the touch panel includes a polymeric film.

10. The system of Claim 1, wherein the touch sensor assembly includes a plurality of transducers that are integrated into the touch panel.

11. The system of Claim 10, wherein the transducers are selected from a group consisting of acoustic transducers, infrared transducers, ultrasonic transducers, resistive transducers, and capacitive transducers.

12. The system of Claim 10, further comprising a bezel to protect the transducers.

13. The system of Claim 1, further comprising a generic device controller unit operatively associated with a reel assembly for controlling the reel assembly.

14. The system of Claim 13, wherein the generic device controller unit runs reel controller firmware.

15. The system of Claim 13, further comprising a microprocessor connected to the generic device controller unit.

16. The system of Claim 1, wherein touch panel software includes driver software.

17. The system of Claim 1, wherein the driver software is capable of controlling and interpreting data from the touch panel controller.

18. The system of Claim 1, wherein the touch panel software includes application software.

19. The system of Claim 18, wherein a microprocessor runs the application software.

20. The system of Claim 1, further comprising a multi-tasking embedded control system which controls both periphery devices and application software.

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21. An enhanced mechanical gaming system utilizing multiple touch panels as user control devices for mechanical assemblies and game play features, the system comprising:
a control panel assembly;
a plurality of touch sensor assemblies utilizing substantially transparent touch panels that produce touch data when activated, and wherein the touch panels provide viewing behind the touch panels;
at least one touch panel controller capable of controlling and interpreting the touch panels; and
10 touch panel software capable of controlling and interpreting the touch data, and applying the touch data to interactive applications of the control panel assembly.

22. An enhanced mechanical gaming kit for modifying an existing gaming machine assembly, the kit utilizing a touch panel as a user control device for mechanical assemblies and game play features, the kit comprising:
a touch sensor assembly utilizing a substantially transparent touch panel that produces 5 touch data when activated, and wherein the touch panel provides viewing behind the touch panel;
a touch panel controller capable of controlling and interpreting the touch panel; and
touch panel software capable of controlling and interpreting the touch data, and applying the touch data to interactive applications of the gaming machine assembly.

23. The system of Claim 22, wherein the gaming machine assembly comprises a reel spinning game machine having at least one reel.

24. The system of Claim 23, wherein a user of the reel spinning game machine is capable of selectively starting and stopping the reels by touching the touch panel at a particular point.

25. The system of Claim 23, wherein a user of the reel spinning game machine is capable of activating different game features by using distinct types, directions, and durations of touches.

26. The system of Claim 23, wherein a user of the reel spinning game machine is capable of selectively activating features and system controls by touching the touch panel at particular points.

27. The system of Claim 22, wherein the substantially transparent touch panel is composed of a composite material.

28. The system of Claim 27, wherein the composite material touch panel comprises a glass material touch panel.

29. The system of Claim 22, wherein the substantially transparent touch panel is composed of a metallic material.

30. The system of Claim 22, wherein the touch panel includes a polymeric film.

31. The system of Claim 22, wherein the touch sensor assembly includes a plurality of transducers that are integrated into the touch panel.

32. The system of Claim 31, wherein the transducers are selected from a group consisting of acoustic transducers, infrared transducers, ultrasonic transducers, resistive transducers, and capacitive transducers.

33. The system of Claim 31, further comprising a bezel to protect the transducers.

34. The system of Claim 22, further comprising a generic device controller unit operatively associated with a reel assembly for controlling the reel assembly.

35. The system of Claim 34, wherein the generic device controller unit runs reel controller firmware.

36. The system of Claim 34, further comprising a microprocessor connected to the generic device controller unit.

37. The system of Claim 22, wherein touch panel software includes driver software.

38. The system of Claim 22, wherein the driver software is capable of controlling and interpreting data from the touch panel controller.

39. The system of Claim 22, wherein the touch panel software includes application software.

40. The system of Claim 39, wherein a microprocessor runs the application software.

41. The system of Claim 22, further comprising a multi-tasking embedded control system which controls both periphery devices and application software.

42. An enhanced mechanical gaming kit for modifying an existing gaming machine assembly, the kit utilizing multiple touch panels as user control devices for mechanical assemblies and game play features, the kit comprising:

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5 that produce touch data when activated, and wherein the touch panels provide viewing behind the touch panels;

at least one touch panel controller capable of controlling and interpreting the touch panels; and

10 touch panel software capable of controlling and interpreting the touch data, and applying the touch data to interactive applications of the gaming machine assembly.

43. A process for enabling enhanced mechanical gaming utilizing a touch panel as a user control device for mechanical assemblies and game play features, the process comprising:

utilizing a gaming machine assembly;

5 providing a touch sensor assembly with a substantially transparent touch panel that produces touch data when activated;

providing viewing behind the touch panel;

controlling and interpreting the touch panel utilizing a touch panel controller;

controlling and interpreting the touch data utilizing touch panel software; and

10 applying the touch data to interactive applications of the gaming machine assembly.

44. The process of Claim 43, wherein the gaming machine assembly comprises a reel spinning game machine having at least one reel.

45. The process of Claim 44, wherein a user of the reel spinning game machine is capable of selectively starting and stopping the reels by touching the touch panel at a particular point.

46. The process of Claim 44, wherein a user of the reel spinning game machine is capable of activating different game features by using distinct types, directions, and durations of touches.

47. The process of Claim 44 wherein a user of the reel spinning game machine is capable of selectively activating features and system controls by touching the touch panel at particular points.

48. The process of Claim 43, wherein the substantially transparent touch panel is composed of a composite material.

49. The process of Claim 48, wherein the composite material touch panel comprises a glass material touch panel.

50. The process of Claim 43, wherein the substantially transparent touch panel is composed of a metallic material.

51. The process of Claim 43, wherein the touch panel includes a polymeric film.

52. The process of Claim 43, wherein the touch sensor assembly includes a plurality of transducers that are integrated into the glass.

53. The process of Claim 52, wherein the transducers are selected from a group consisting of acoustic transducers, infrared transducers, ultrasonic transducers, resistive transducers, and capacitive transducers.

54. The process of Claim 52, further comprising a bezel to protect the transducers.

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55. The process of Claim 43, further comprising a generic device controller unit operatively associated with a reel assembly for controlling the reel assembly.

56. The process of Claim 55, wherein the generic device controller unit runs reel controller firmware.

57. The process of Claim 55, further comprising a microprocessor connected to the generic device controller unit.

58. The process of Claim 43, wherein touch panel software includes driver software.

59. The process of Claim 43, wherein the driver software is capable of controlling and interpreting data from the touch panel controller.

60. The process of Claim 43, wherein the touch panel software includes application software.

61. The process of Claim 60, wherein a microprocessor runs the application software.

62. The process of Claim 43, further comprising a multi-tasking embedded control system which controls both periphery devices and application software.

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63. A process for enabling enhanced mechanical gaming utilizing multiple touch panels to provide user control for mechanical assemblies and game play features, the system comprising:

- utilizing a control panel assembly;
- providing a plurality of touch sensor assemblies with a substantially transparent touch panels that produce touch data when activated;
- providing viewing behind the touch panels;
- controlling and interpreting the touch panels utilizing at least one touch panel controller;

10 controlling and interpreting the touch data utilizing touch panel software; and applying the touch data to interactive applications of the control panel assembly.

64. A computer program product readable by a computing system and encoding a computer program of instructions for executing a computer process for enabling enhanced mechanical gaming utilizing a touch panel as a user control device for mechanical assemblies and game play features, said computer process comprising:

- 5 receiving touch data produced when a touch sensor assembly with a substantially transparent touch panel is activated, wherein the substantially transparent touch panel provides viewing behind the touch panel;
- controlling and interpreting the touch panel;
- controlling and interpreting the touch data; and

10 applying the touch data to interactive applications of a gaming machine assembly.

65. The computer program product of Claim 64, wherein the gaming machine assembly comprises a reel spinning game machine having at least one reel.

66. The computer program product of Claim 65, wherein a user of the reel spinning game machine is capable of selectively starting and stopping the reels by touching the touch panel at a particular point.

67. The computer program product of Claim 65, wherein a user of the reel spinning game machine is capable of activating different game features by using distinct types, directions, and durations of touches..

68. The computer program product of Claim 65, wherein a user of the reel spinning game machine is capable of selectively activating features and system controls by touching the touch panel at particular points.

69. The computer program product of Claim 64, wherein the substantially transparent touch panel is composed of a composite material.

70. The computer program product of Claim 69, wherein the composite material touch panel comprises a glass material touch panel.

71. The computer program product of Claim 64, wherein the substantially transparent touch panel is composed of a metallic material.

72. The computer program product of Claim 64, wherein the touch panel includes a polymeric film.

73. The computer program product of Claim 64, wherein the touch sensor assembly includes a plurality of transducers that are integrated into the glass.

74. The computer program product of Claim 73, wherein the transducers are selected from a group consisting of acoustic transducers, infrared transducers, ultrasonic transducers, resistive transducers, and capacitive transducers.

75. The computer program product of Claim 73, further comprising a bezel to protect the transducers.

76. The computer program product of Claim 64, further comprising a generic device controller unit operatively associated with a reel assembly for controlling the reel assembly.

77. The computer program product of Claim 76, wherein the generic device controller unit runs reel controller firmware.

78. The computer program product of Claim 76, further comprising a microprocessor connected to the generic device controller unit.

79. The computer program product of Claim 64, wherein touch panel software includes driver software.

80. The computer program product of Claim 64, wherein the driver software is capable of controlling and interpreting data from the touch panel controller.

81. The computer program product of Claim 64, wherein the touch panel software includes application software.

82. The computer program product of Claim 81, wherein a microprocessor runs the application software.

83. The computer program product of Claim 64, further comprising a multi-tasking embedded control system which controls both periphery devices and application software.

84. A computer program product readable by a computing system and encoding a computer program of instructions for executing a computer process for enabling enhanced mechanical gaming utilizing multiple touch panels to provide user control for mechanical assemblies and game play features, said computer process comprising:

5 receiving touch data produced when touch sensor assemblies with substantially transparent touch panels are activated, wherein the substantially transparent touch panels provide viewing behind the touch panels;

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controlling and interpreting the touch panels;
controlling and interpreting the touch data; and
applying the touch data to interactive applications of the control panels.